

MATERIAL DATA SHEET

Material type: Yttria (Y₂O₃)

Y23

Properties		Unit	Specific value
Main component		-	Y ₂ O ₃
Purity		wt.-%	> 99.7
Density		g / cm ³	≥ 4.90
Open porosity		vol.-%	0
Average size of crystallites		µm	20 - 30
Bending strength σ_m	DIN EN 843-1	MPa	180
Thermal shock resistance		-	- / +
Young's modulus	static	GPa	160
Maximum application temperature		°C	2200
Hardness	HV1	-	680
Coefficient of thermal expansion	20 - 500°C	10 ⁻⁶ / K	7.16
	20-1000°C	10 ⁻⁶ / K	7.91
Typical colour		-	white - grey

The data indicated on this table are in line with the introductory German Industrial Standard DIN 60672-2 and relate to test specimens from which they are obtained. They are not unconditionally applicable to other forms of the same material. The data must be regarded as indicative only. All data refer to a temperature of 20 °C, unless otherwise specified.

Subject to modifications.
 27.06.2017